The Vims : Is it Alive ?

But more comforting to the mechanist is the recent knowledge acquired of the virus. For some time it has been known that some infectious diseases are caused by some kind of self-multiplying substance which, if particulate, is of particles too small to be seen under the best power of the microscope, and too small to be caught by the porcelain filters the pores of which will not permit the passage of the smallest visible bacteria and cocci. These disease-producing substances have been called the filter-passing viruses. They are assumed to be living things because they seem to multiply themselves in the tissues of the animals and plants which they infect, and because they can be rendered innocuous by most of those influences which readily kill bacteria, cocci, and protozoa.

Of these viruses one which flourishes in the living leaves of the tobacco plant, and is known as the tobacco virus, has been most intensively studied ; as late as the year 1936 important new light has been thrown on it. The virus can be obtained in some quantity by extraction from large quantities of leaves visibly affected by it. Dr. W. M. Stanley reports that he has been able to obtain crystals of the virus and to show that it consists of protein molecules, each one heavier, it is said, than any other known to chemists, and containing perhaps more than a million atoms. Also Stanley has been able to dissolve and recrystallize it again and again (a process commonly regarded as giving very good assurance of chemical purity);

and then to infect a tobacco plant with this watery solution of a pure chemical; whereupon it has multiplied itself in the leaves, as though it were a living substance. I cite these statements from press notices of Dr, Stanley's report